

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT ☐  
(highlight changes)

<b>APPLICATION FOR PERMIT TO DRILL</b>				5. MINERAL LEASE NO: <b>ML-48176</b>	6. SURFACE: State
1A. TYPE OF WORK:    DRILL <input checked="" type="checkbox"/> REENTER <input type="checkbox"/> DEEPEN <input type="checkbox"/>				7. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A	
8. TYPE OF WELL:    OIL <input type="checkbox"/> GAS <input checked="" type="checkbox"/> OTHER _____    SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>				8. UNIT or CA AGREEMENT NAME: N/A	
2. NAME OF OPERATOR: <b>XTO Energy, Inc.</b>				9. WELL NAME and NUMBER: <b>State of Utah 17-8-20-13</b>	
3. ADDRESS OF OPERATOR: <b>2700 Fmt Ave. Bld K - S</b> CITY <b>Farmington</b> STATE <b>NM</b> ZIP <b>87401</b>			PHONE NUMBER: <b>(505) 324-1090</b>	10. FIELD AND POOL, OR WILDCAT: <b>Ferron Sandstone</b>	
4. LOCATION OF WELL (FOOTAGES)  AT SURFACE: <b>2440' FSL x 566' FWL in Sec 20, T17S, R8E</b>  AT PROPOSED PRODUCING ZONE: <b>same</b>				11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: <b>NWSW 20 17S 8E S</b>	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: <b>Approximately 3 miles Northwest of Huntington, Utah</b>				12. COUNTY: <b>Emery</b>	13. STATE: <b>UTAH</b>
15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE (FEET) <b>450'</b>		16. NUMBER OF ACRES IN LEASE: <b>1120</b>		17. NUMBER OF ACRES ASSIGNED TO THIS WELL: <b>160</b>	
18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR) ON THIS LEASE (FEET) <b>1950'</b>		19. PROPOSED DEPTH: <b>3,000</b>		20. BOND DESCRIPTION: <b>UTB-000138</b>	
21. ELEVATIONS (SHOW WHETHER DF, RT, GR, ETC.): <b>6877' Ground Elevation</b>		22. APPROXIMATE DATE WORK WILL START: <b>12/1/2006</b>		23. ESTIMATED DURATION: <b>2 weeks</b>	

24. PROPOSED CASING AND CEMENTING PROGRAM							
SIZE OF HOLE	CASING SIZE, GRADE, AND WEIGHT PER FOOT			SETTING DEPTH	CEMENT TYPE, QUANTITY, YIELD, AND SLURRY WEIGHT		
12.25"	8.625"	J-55	24#	300	Type V	+/- 230 sx	1.61 ft3/sx 14.2 pp
7.875"	5.5"	J-55	15.5#	3,000	CBM light wt - lead	+/- 75 sx	4.15 ft3/sx 10.5 pp
					CBM light wt - tail	+/- 130 sx	2.25 ft3/sx 12.5 pp

25. **ATTACHMENTS**

VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES:

<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER	<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN
<input checked="" type="checkbox"/> EVIDENCE OF DIVISION OF WATER RIGHTS APPROVAL FOR USE OF WATER	<input type="checkbox"/> FORM 5, IF OPERATOR IS PERSON OR COMPANY OTHER THAN THE LEASE OWNER

NAME (PLEASE PRINT) Kyla Vaughan      TITLE Regulatory Compliance Tech

SIGNATURE *Kyla Vaughan*      DATE 7/26/2006

(This space for State use only)

CC: SITLA

API NUMBER ASSIGNED: 2015-30698

APPROVAL:

(11/2001)

(See Instructions on Reverse Side)

**RECEIVED**

**JUL 31 2006**

**DIV. OF OIL, GAS & MINING**

# Range 8 East

(S89°58'E - 2638.02')

(S89°54'W - 2632.08')

N89°41'26"E - 2619.21'

N89°36'11"E - 2632.10'

N00°33'23"W - 2613.23'

2813.36'

STATE OF UTAH  
#17-8-20-13  
ELEV. 6877.2'

UTM  
N 4353073  
E 495281

20

566.43'

2439.87'  
CALCULATED

(N89°54'W - 5281.32')

## Legend

- Drill Hole Location
- ⊙ Brass Cap (Found)
- Brass Cap (Searched for, but not found)
- △ Rock Pile
- ( ) GLO
- GPS Measured

## NOTES:

1. UTM and Latitude / Longitude Coordinates are derived using a GPS Pathfinder and are shown in NAD 27 Datum.

LAT / LONG  
39°19'44.184" N  
111°03'17.081" W

## Location:

The well location was determined using a Trimble 4700 GPS survey grade unit.

## Basis of Bearing:

The Basis of Bearing is GPS Measured.

## GLO Bearing:

The Bearings indicated are per the recorded plat obtained from the U.S. Land Office.

## Basis of Elevation:

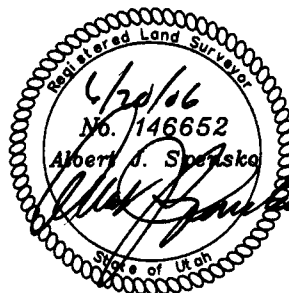
Basis of Elevation of 6192.0' being at the Northwest Section corner of Section 10, Township 17 South, Range 8 East, Salt Lake Base & Meridian, as shown on the Red Point Quadrangle 7.5 Minute Series Map.

## Description of Location:

Proposed Drill Hole located in the NW1/4 SW1/4 of Section 20, T17S, R8E, S.L.B.&M., being 2813.36' South from the North line and 566.43' East from the West line of Section 20, T17S, R8E, Salt Lake Base & Meridian.

## Surveyor's Certificate:

I, Albert J. Spensko, a Registered Professional Land Surveyor, holding Certificate 146652 State of Utah, do hereby certify that the information on this drawing is a true and accurate survey based on data of record and was conducted under my personal direction and supervision as shown hereon.



## GRAPHIC SCALE

0 500' 1000'  
( IN FEET )  
1 inch = 1000 ft.



## TALON RESOURCES, INC.

195 North 100 West P.O. Box 1230  
Huntington, Utah 84528  
Phone (435)687-5310 Fax (435)687-5311  
E-Mail talon@etv.net



State of Utah #17-8-20-13  
Section 20, T17S, R8E, S.L.B.&M.  
Emery County, Utah

Drawn By: J. Stansfield	Checked By: L.W.J./A.J.S.
Drawing No. A-1	Date 06/19/06
	Scale 1" = 1000'
Sheet 1 of 4	Job No. 2484

## **Application for Permit to Drill Surface Use Plan**

**Company:** XTO Energy, Inc.  
**Well No:** State of Utah 17-8-20-13  
**Location:** Section 20, T17S, R8E  
**Lease No:** ML-48176

### **Thirteen Point Surface Use Plan**

The dirt contractor will be provided an approved copy of the surface use plan of operations before starting construction.

#### **1) Existing Roads**

- a) Proposed route to location: The proposed route to location is show on Exhibit "A" and is from the Red Point Quadrangle 7.5 minute series USGS quadrangle map
- b) Location of proposed well in relation to town or other reference point: The well is located approx 3 miles NW of Huntington, Utah. Travel North from Huntington on Hwy 10 to 400 North, go 3.1 miles north, turn left go 2 miles to intersection, go thru intersection 1 mile to location.
- c) Contact the County Road Department for use of county roads: No encroachment permit will be required.
- d) Plans for improvement and/or maintenance of existing roads: All existing roads within 1 mile of the drill site are shown on Exhibit "A". All existing roads that will be used to the well location will be maintained to their current conditions or better.
- e) Other comments: None

#### **2) Planned Access Roads**

- a) Location of Access Road: Starting from a point along an existing road in the SW/4 of Section 22, T17S, R8E.
- b) Length of New Road: Approx. 1730' of new road will be built to location. See Exhibit "B".
- c) Length of Existing Road to Upgrade: No additional upgrades should be necessary to existing roads

- d) **Maximum Disturbed Width:** Typically new access roads require up to 60' of disturbed width which includes ROW for gas and water pipe lines and electric service.
- e) **Travel Width of Access Road:** 25' or less
- f) **Maximum Grade after Construction:** Maximum grades will not exceed 10% after construction.
- g) **Turnouts Planned:** No turnouts are planned at this time.
- h) **Surface Materials:** Only native materials will be used if additional construction is required. If necessary, gravel or rock maybe purchased and used to improve road conditions and travel.
- i) **Drainage (crowing, ditching, culverts, etc):** Roads will be re-crowned and bar ditches, if necessary, will be located along either side. 18"-24" culverts will be installed as necessary.
- j) **Cattle Guards:** No cattle guards are planned at this time. If necessary cattle guards will be specified in the stipulations.
- k) **Length of new and/or existing roads which lie outside the lease or unit boundry for which a BLM/State/fee right of way is required:**  
None
- l) **Other:**
  - i) Surface disturbance and vehicular travel will be limited to the approved location and access road. Any additional area needed must be approved by the State of Utah in advance.
  - ii) If a right-of-way is necessary, no surface disturbing activities shall take place on the subject right-of-way until the associated APD is approved. The holder will adhere to conditions of approval in the Surface Use Program of the approved APD, relevant to any right-of-
  - iii) If a right-of-way is secured, boundary adjustments in the lease or unit shall automatically amend this right-of-way to include that portion of the facility no longer contained within the lease or unit. In the event of an automatic amendment to this right-of-way grant, the prior on-lease/unit conditions of approval of this facility will not be affected even though they would now apply to facilities outside of the lease/unit as a result of a boundary adjustment. Rental fees, if appropriate shall be recalculated based on the conditions of this grant and the regulations in effect at the time of an automatic amendment.

- iv) If at any time the facilities located on public lands authorized by the terms of the lease are no longer included in the lease (due to a contraction in the unit or other lease or unit boundary change) the State of Utah will process a change in authorization to the appropriate statute. The authorization will be subject to appropriate rental, or other financial obligations determined by the State of Utah.
- v) If the well is not productive, the access road will be rehabilitated or brought to Resource (Class III) Road Standards within 60 days of dismantling the rig. If upgraded, the access road must be maintained at these standards until the well is properly abandoned. If this time frame cannot be met, the Field Office Manager will be notified so that temporary drainage control can be installed along the access road.

3) Location of Existing Wells:

- a) On a map, show the location of all water, injection, disposal, producing and drilling wells within a one mile radius of the proposed well, and describe the status of each: See Exhibit "C".

4) Location of Production Facilities:

- a) On-site facilities: Typical on-site facilities will consist of a wellhead, gas flow line, water flow line, artificial lifting system (pumping unit), 2 phase separator, gas measurement, water measurement, electronics, a heated enclosure/building for weather and environmental protection and chemical injection equipment (as required). All production and measurement shall conform to the provisions of 43 CFR § 3162.7 and Onshore Oil and Gas Order No. 4, if applicable.
- b) All permanent (in place for six months or longer) structures constructed or installed on the well site location will be painted a flat, non reflective color to match the standard environmental colors, as specified by the COA's in the APD. All facilities will be painted within six months of installation. Facilities required complying with the Occupational Safety and Health Act (OSHA) may be excluded.
- c) Off-site facilities: Off-site facilities are located at the CDP station and include compression, processing, separation, tanks, pits, electronics and produced water disposal (SWD) well.
- d) Pipelines: The well will be produced into gas and water pipelines (sizes to be determined) and transported to existing pipelines. See Exhibit "B" for the proposed pipe line route.
- e) Power lines: Power lines are located underground in the same ROW as the water and gas pipe lines.

5) Location and Type of Water Supply:

- a) All water required for drilling will be purchased from a local municipal water supply. If possible, currently produced coal well water may also be used after receiving any necessary permits. Water will be trucked to location by a third party trucking company who specializes in water hauling.
- b) Water obtained on private land, or land administered by another agency, will require approval from the owner or agency for use of the land.

6) Source of Construction Material:

- a) Pad construction material will be obtained from (if the source is Federally owned, show location on a map): All construction material will be purchased from private landowners or a commercial gravel/materials pit. The use of materials will conform to 43 CFR § 3610.2-3, if applicable.
- b) The use of materials under State of Utah jurisdiction will conform to 43 CFR § 3610.2-3, if applicable.

7) Methods of Handling Waste Disposal:

- a) Describe the methods and locations proposed for safe containment and disposal of waste material, e.g. cuttings, produced water, garbage, sewage, chemicals, etc. The reserve pit will be located along the edge and within the boundaries of the designated well pad. The walls of the pit will be sloped at no greater than 2 to 1 and will be lined with a synthetic material of approximately 12 mils in thickness. The reserve pit shall be located in cut material, with at least 50% of the pit volume being below original ground level. Three sides of the pit will be fenced before drilling starts. The fourth side will be fenced as soon as drilling is completed, and shall remain until the pit is dry. The amount of time the pit may remain open will typically be specified by the COA's. Once dry, the liner will be cut and removed at the mud line and the pit will be covered and buried in place.
- b) Trash must be contained in a trash cage and hauled away to an approved disposal site as necessary but no later than at the completion of drilling operations.
- c) Sewage from trailers and chemical portable toilets will be removed on a regular basis by a third party contractor and disposed of at an authorized sanitary waste facility.

- d) Any and all chemicals used during the drilling and completion of the well will be kept to a minimum and stored within the boundaries of the well pad. The third party chemical contractor will be responsible for containment and clean-up and removal of all spilled chemicals on location.

8) Ancillary Facilities:

- a) No ancillary facilities will be required during the drilling or completion of the well.

9) Well Site Layout

- a) Depict the pit, rig, cut and fill, topsoil, etc. on a plat with a scale of at least 1"=50'. See Exhibit "D" & "E".
- b) All equipment and vehicles that will be used to drill and complete this well will remain within the boundaries of the approved well pad. Any equipment and or vehicles park or stored off of the location will be considered trespassing on federal lands and will NOT be tolerated.
- c) Materials obtained from the construction of location, like topsoil and vegetation will be stock piled as indicated and permitted by the approved APD. The stock piles themselves may be outside the approved boundaries of the well pad.

10) Plans for Restoration of the Surface:

- a) The top 6 inches of topsoil material will be removed from the location and stockpiled separately on: Adjacent Land or as specified by the approved APD.
- b) Topsoil along the access road will be reserved in place adjacent to the road
- c) Within 30-45 days after completion of well, all equipment that is not necessary for production shall be removed.
- d) The reserve pit and that portion of the location not needed for production will be reclaimed 90-120 days after completion of the well.
- e) Before any dirt work to restore the location takes place, the reserve pit must be ready for burial.
- f) All road surfacing will be removed prior to the rehabilitation of roads.
- g) Reclaimed roads will have the berms and cuts reduced and will be closed to vehicle use

- h) All disturbed areas will be re-contoured to replicate the natural slope.
- i) The stockpiled topsoil will be evenly distributed over the disturbed area.
- j) Prior to reseeding, all disturbed areas, including the access roads, will be scarified and left with a rough surface.
- k) Seed will be broadcast or drilled between September and November, or at a time specified by the BLM and or state. If broadcast, a harrow or some other implement will be dragged over the seeded area to assure seed coverage.

The following seed mixture will be used: As specified in the

- l) conditions of approval
- m) If necessary, an abandonment marker will be one of the following, as specified by the State of Utah:
  - i) at least four feet above ground level,
  - ii) at restored ground level, or
  - iii) below ground level.
  - iv) In any case the marker shall be inscribed with the following: operator name, lease number, well name and surveyed description (township, range, section and either quarter-quarter or footages).

- n) Additional requirements: None

11) Surface and Mineral Ownership:

- a) Both the surface and minerals are owned by the State of Utah.

12) Other Information:

- a) Archeological Concerns: An approved contractor will submit the appropriate reports to the agency as required. Special stipulations will be included in the COA's of the approved APD.
- b) The operator is responsible for informing all persons in the area who are associated with this project that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during construction, the operator is to immediately stop work that might further disturb such materials, and contact the State of Utah Field Office. Within five (5) working days, the State of Utah will inform the operator as to:



- i) whether the materials appear eligible for the National Register of Historic Places;
    - ii) the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary); and
    - iii) a time frame for the State of Utah to complete an expedited review under 36 CFR § 800.11 to confirm, through the State Historic Preservation Officer, that the findings of the State of Utah are correct and that mitigation is appropriate.
  - c) If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the State of Utah will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation costs. The State of Utah will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the State of Utah that the required mitigation has been completed, the operator will then be allowed to resume construction.
  - d) Threatened and Endangered Species Concerns:
    - i) An approved contractor will submit the appropriate reports as required. Special stipulation will be included in the COA's of the approved APD.
  - e) Wildlife Seasonal Restrictions: Current wildlife restrictions and closure dates are specified in the BLM's Environmental Impact Statement.
- 13) The Drilling Program is attached: See Exhibit "F".
- 14) Lessee's or Operator's Representatives and Certification:

**Permitting & Compliance:**

**Kyla Vaughan**

Regulatory Compliance  
XTO Energy, Inc.  
2700 Farmington Avenue, Bldg K, Suite 1  
Farmington, NM 87401  
505-324-1090

**Drilling & Completions:**

**John Egelston**

XTO Energy, Inc.  
2700 Farmington Avenue, Bldg K, Suite 1  
Farmington, NM 87401  
505-324-1090

**Certification:**

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exist; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by XTO Energy Inc. and its contractors and subcontractors in conformity with this APD package and the terms and conditions under which it is approved. I also certify responsibility for the operations conducted on that portion of the leased lands associated with this application, with bond coverage being provided by XTO Energy Inc. This statement is subject to the provisions of 18 U.S.C. § 1001 for the filing of a false statement.

Signature: \_\_\_\_\_

  
Kyla Vaughan

Date: July 26, 2006

NAD27 Zone 12S 504000m E.



EXHIBIT A



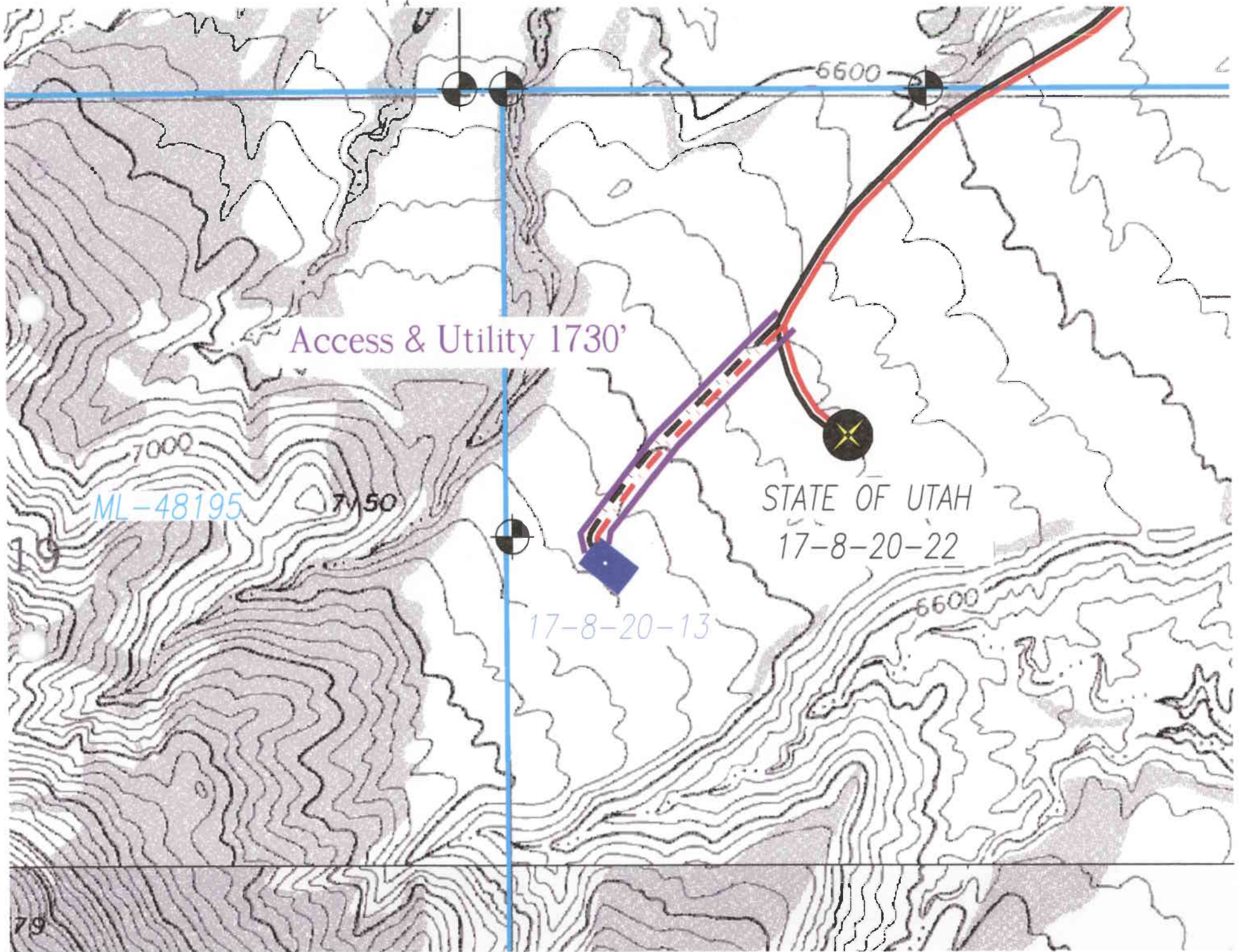
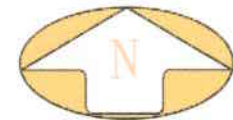
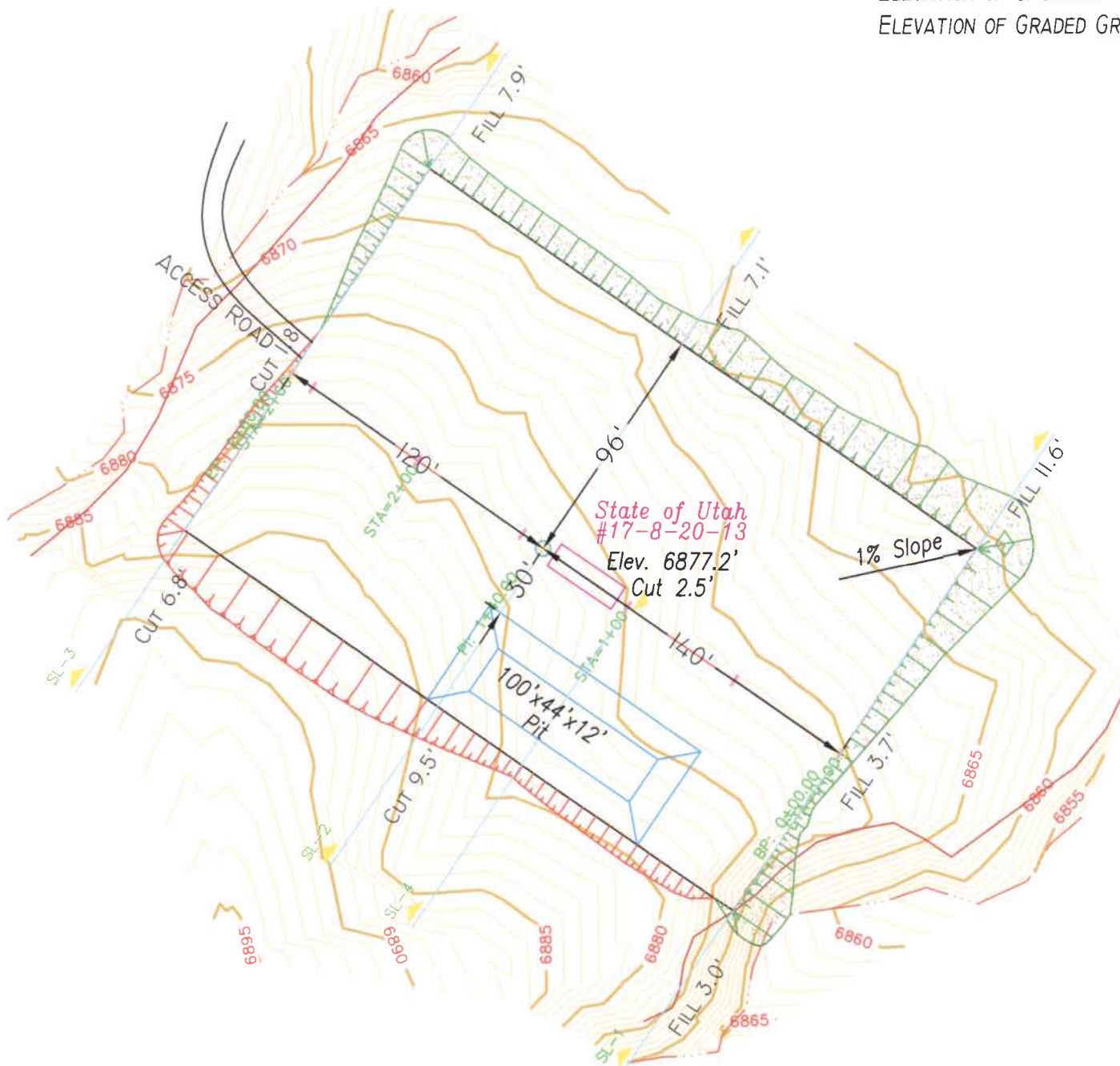




EXHIBIT C



ELEVATION OF UNGRADED GROUND AT LOCATION STAKE = 6877.2  
 ELEVATION OF GRADED GROUND AT LOCATION STAKE = 6874.7'



**Talon Resources, Inc.**

195 North 100 West P.O. Box 1230  
 Huntington, Utah 84528  
 Phone (435)687-5310 Fax (435)687-5311  
 E-Mail talon@etv.net



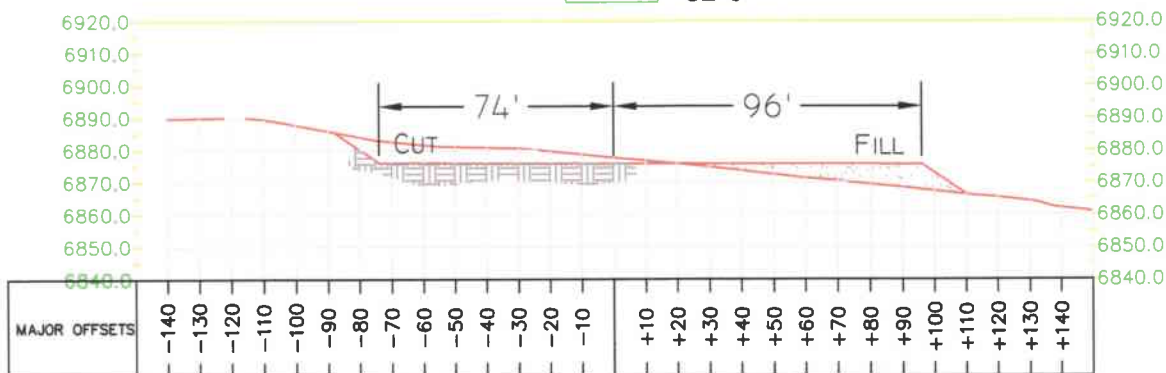
**LOCATION LAYOUT**

**Section 20, T17S, R8E, S.L.B.&M.  
 State of Utah #17-8-20-13**

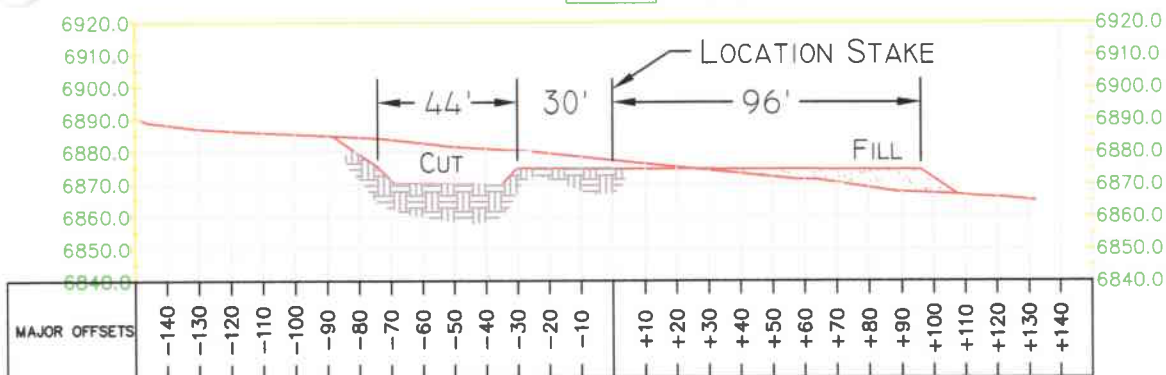
Drawn By: J. STANSFIELD	Checked By: L.W.J.
Drawing No. <b>A-2</b>	Date: 06/07/06
	Scale: 1" = 60'
Sheet <b>2</b> of <b>4</b>	Job No. 2484

**EXHIBIT D**

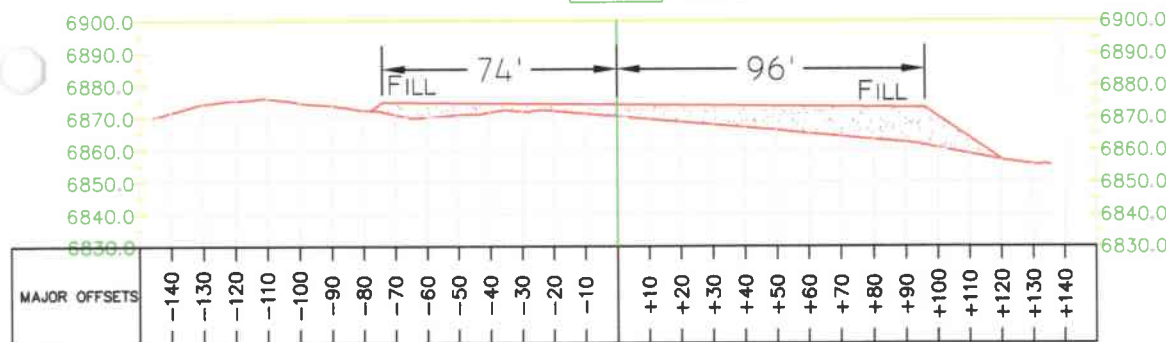
2+60.00 SL-3



1+40.00 SL-2



0+00.00 SL-1



APPROXIMATE YARDAGES

(6") TOPSOIL STRIPPING = 750 CU. YDS.

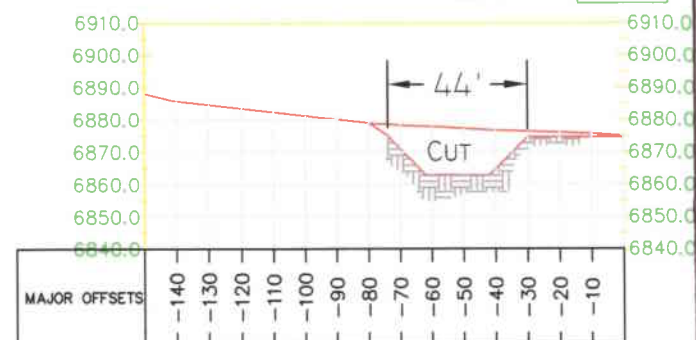
TOTAL CUT = 5,215 CU. YDS.

(INCLUDING PIT)

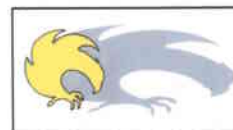
TOTAL FILL = 4,725 CU. YDS.

SL-4

1+00.00



SLOPE = 1 1/2 : 1  
(EXCEPT PIT)  
PIT SLOPE = 1 : 1



Talon Resources, Inc.

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TYPICAL CROSS SECTION  
Section 20, T17S, R8E, S.L.B.&M.  
State of Utah #17-8-20-1

Drawn By: J. STANSFIELD	Checked By: L.W.J.
Drawing No. C-1	Date: 06/07/06
	Scale: 1" = 60'
Sheet 3 of 4	Job No. 2484

# XTO Energy, Inc.

State of Utah 17-8-20-13

Drilling Data For APD

July 26, 2006

Surface Location: 2440' FSL & 566' FWL, Sec. 20, T17S, R8E

Projected TD: 3000'

Approximate Elevation: 6877'

Objective: Ferron Coal/Sand

KB Elevation: 6889'

## 1) Mud Program:

Interval	0' to 300'	300' to 3000'
Hole size	12.25 in	8.625 in
Mud Type	air mist	Air/LSND / Gel Chemical
Weight	N/A	8.4 - 8.6
Viscosity	N/A	45 - 60
Water Loss	N/A	8 - 10

- a) Air drill to TD unless excessive water flow is encountered then switch to water based mud. If mud is required, use fibrous materials as needed to control seepage and lost circulation. Pump high viscosity sweeps as needed for hole cleaning. Raise viscosity at TD for logging. Reduce viscosity after logging for cementing.
- b) The blooie line will be approximately 100' in length and will extend in a straight line from below the rotating head as indicated in the BOP schematic. An automatic spark-type igniter will be fixed to the end of the blooie line and set to provide a continuous spark to ignite and burn any produced hydrocarbons and/or gases.
- c) If necessary, de-dusting will be accomplished with a small pump, waterline and spray nipple positioned near the end of the blooie line to provide a continuous spray of water.
- d) Sufficient mud materials will be stored on location to maintain well control and combat lost circulation problems that might reasonably be expected.
- e) The BOP system will be consistent with API RP 53 and Onshore Oil and Gas Order No. 2. Pressure tests of the surface casing and all BOP equipment subject to pressure will be conducted before drilling the surface casing shoe. Blowout preventer controls will be installed prior to drilling the surface casing shoe and will remain in use until the well is completed or abandoned. Ram preventers shall be inspected and operated daily. Annular preventers shall be inspected and operated weekly to ensure good mechanical working order. The inspections and tests shall be recorded in the drilling log and daily drilling report. See the attached BOP and choke manifold schematic.

EXHIBIT



## 2. Casing Program

### a) Surface Casing set @ 300' in a 12.25 in hole

8.625 in, 24#, J-55, ST&C (8.097" ID, 7.97" Drift)					
Collapse Press	Burst Press	Joint Strength	SF Collapse	SF Burst	SF Tension
950	2950	272	7	23	38

### b) Production Casing set @ 3000' in a 7.875 in hole

5.5 in, 15.5#, J-55, ST&C (4.89 ID, 4.7 Drift)					
Collapse Press	Burst Press	Joint Strength	SF Collapse	SF Burst	SF Tension
4910	3,300	202	3.8	2.5	4.3

Safety Factors based on vertical wellbore conditions with hydrostatic of fresh water used to calculate burst and collapse.

## 3. Well Heads:

- a) Casing Head: Install Larkin Fig 92 (or equivalent), 10" nominal, 2,000 psig WP (4,000 psig test) with 8-5/8" 8rnd thread on bottom and 10-3/4" 8rnd thread on top. NU BOP and choke manifold (see attached schematic). Stack to consist of drilling spool with choke and kill lines, double rams with pipe rams on top, blind rams on bottom. Use cold water and test BOP to 250 psi low and 1,000 psi high. Record all tests on the IADC report. Inspect accumulator and closing unit to ensure that pre-charge pressures and oil levels are within API Specifications and report same on IADC report.
- b) Tubing Head: Larkin Fig 612 (or equivalent), 5,000 psig WP (5,000 psig test), 5-1/2" SOW (or 8rnd female thread) on bottom, 7-1/16" 5,000# flange on top w/2 - 3" LPOs.

## 4. Cement Program:

- a) Surface: 230 sx of Type V cement (or equivalent) containing 1% CaCl, 1/4 pps Flocele and 10% Cal\_Seal mixed at 14.2 ppg and 1.61 ft<sup>3</sup>/sx
- i) Slurry volume is 370 ft<sup>3</sup>, 200% excess of calculated annular volume to 300'
- b) Production:
- i) The Production Casing will be cemented using 2 (lead and tail) cement slurries. The lead cement (filler grade) volume will be calculated based on a maximum achievable top assuming formation pressure of 1,000 psi at the shoe. The Tail Cement will be calculated from TD to 300' above the Upper Ferron Sandstone as indicated on the formation tops table.
- ii) Lead Cement: 75 sx of CBM Light Weight Cement with 10 pps Gilsonite and 1/4 pps celloflake mixed at 10.5 ppg and 4.15 ft<sup>3</sup>/sx

iii) Tail Cement: 130 sx of CBM Light Weight Cement with 10 pps  
Gilsonite and 1/4 pps celloflake mixed at 12.5 ppg and 2.25 ft<sup>3</sup>/sx

iv) Slurry volume is 386 cu. Ft., 40% excess of calculated annular  
volume to 1000 psi hydrostatic over formation pressure.

#### 5. Logging Program

- a) **Mud logger:** The mud logger will come on after surface pipe is set and will remain until TD. The mud will be logged in 10' intervals.
- b) Run Array Induction (if wet), compensated neutron, density, GR, caliper, SP (if wet) and Pe fr/TD to the bottom of the surface csg.

#### 6. Formation Tops:

Formation	Sub-Sea	Well depth
Top Upper Ferron Sand (sub sea)	3,200	3,677
Top Coal Zone (sub sea)	3,175	3,702
Top Lower Ferron Sand (sub sea)	3,035	3,842
Total Depth		3,000

- a) No known oil zones will be penetrated.
- b) Gas bearing sandstones and coals will be penetrated from 3200 ft to 3035 ft
- c) No known fresh water zones will be penetrated. The gas bearing sandstones and coals may contain in-situ water.
- d) No known mineral zones will be penetrated.
- e) Any prospectively valuable minerals and all fresh water zones encountered during drilling will be recorded, cased and cemented. If possible, water flow rates will be measured and samples will be taken and analyzed with the results being submitted to the appropriate agency.

#### 7. Company Personnel:

Name	Title	Office phone	Cell Phone
Greg Vick	Drilling Engineer	505-564-6734	505-320-7274
Jerry Lacy	Drilling Superintendent	505-566-7914	505-320-6543
Joshua Stark	Project Geologist	817-885-2240	817-565-7158
Jerry Stadulis	Reservoir Engineer	817-855-2338	817-480-4056
Dennis Elrod	Drilling Foreman	505-566-7907	505-486-6460

**EXHIBIT F**

# BOP SCHEMATIC FOR DRILLING OPERATIONS CLASS 1 (2M) NORMAL PRESSURE

## TESTING PROCEDURE

### 1. Test BOP after installation:

Pressure test BOP to 200-300  
psig (low pressure) for 10 min.

Test BOP to Working Press or  
to 70% internal yield of surf csg  
(10 min) or which ever is less.

### 2. Test operation of (both) rams on every trip.

### 3. Check and record Accumulator pressure on every tour.

### 4. Re-pressure test BOP stack after changing out rams.

### 5. Have kelly cock valve with handle available.

### 6. Have safety valve and subs to fit all sizes of drill string on the rig floor and ready to go.

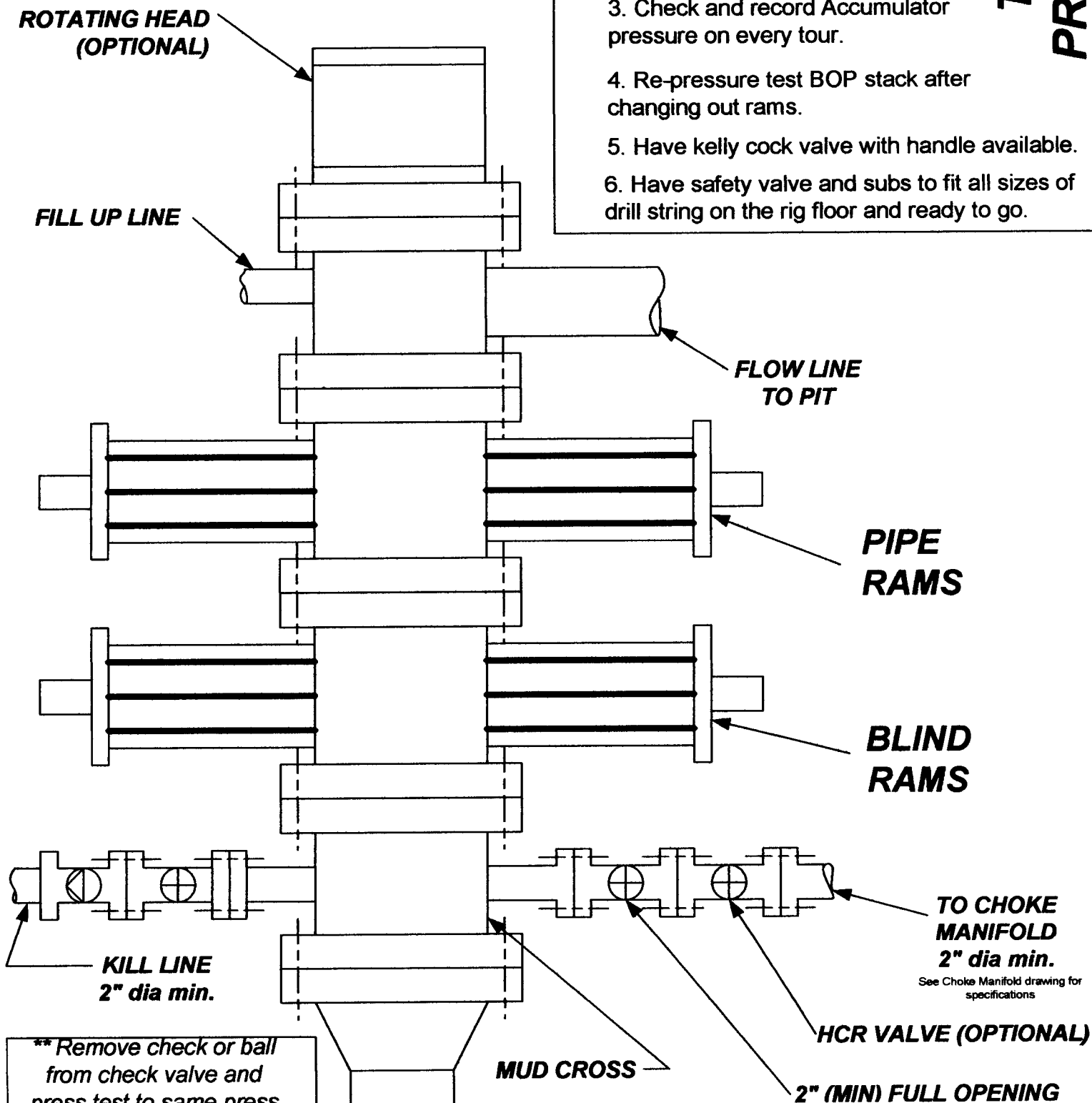


EXHIBIT F

# CHOKES MANIFOLD SCHEMATIC FOR DRILLING OPERATIONS CLASS 1 (2M) NORMAL PRESSURE

1. Stake all lines from choke manifold to pit.
2. Pressure test choke manifold after installation.
3. Pressure test manifold at the same time with the BOP Stack. Test manifold to the same test pressures.

## TESTING PROCEDURE

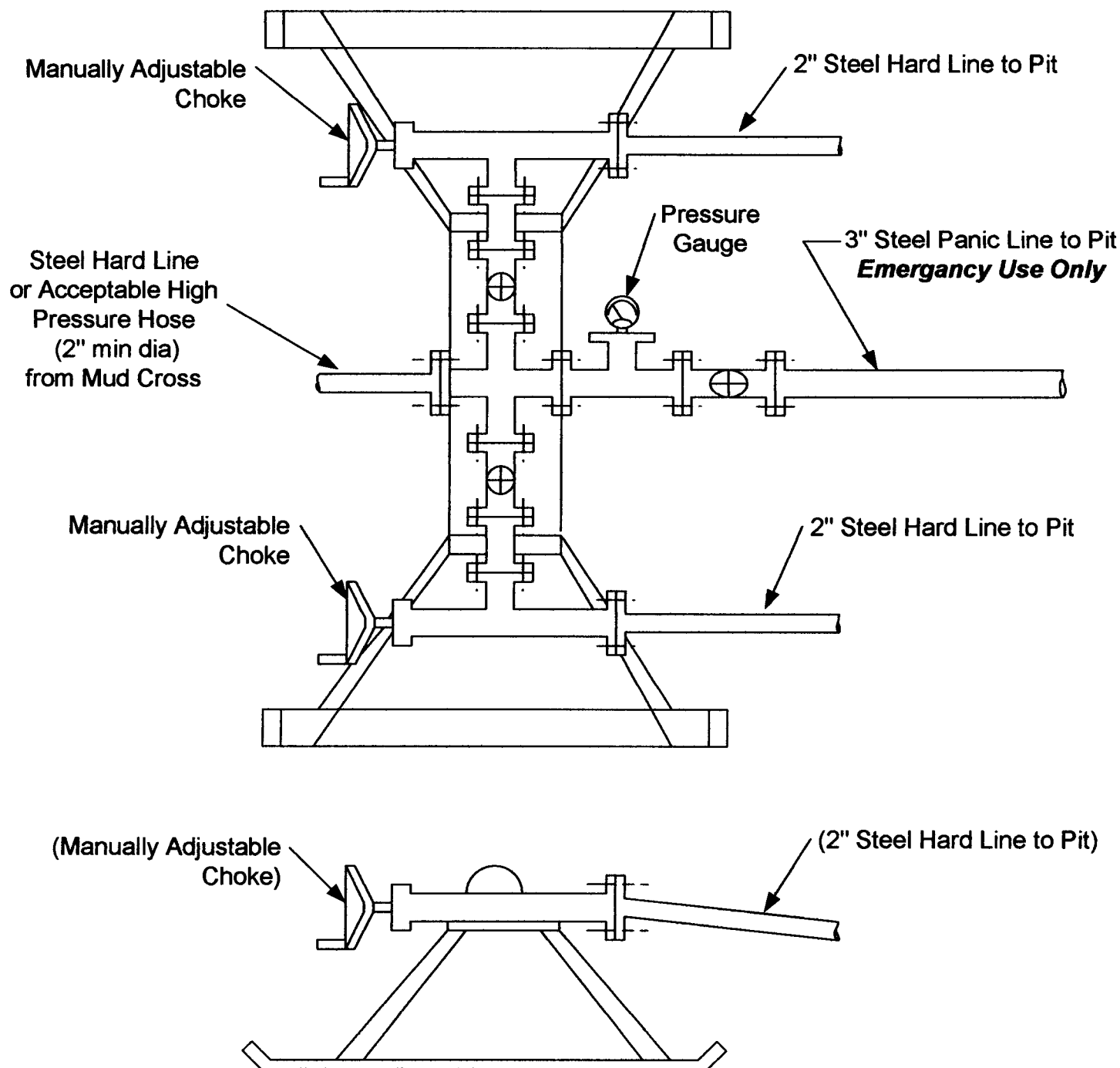


EXHIBIT F